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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/667,826 09/21/00 CANNATA

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*nv*

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MM91/0727

EXAMINER

HANNAHER, C

ART UNIT

PAPER NUMBER

2878

DATE MAILED:

07/27/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/667,826

Applicant(s)

CANNATA ET AL.

Examiner

Constantine Hannaher

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other: \_\_\_\_

## **DETAILED ACTION**

### **Information Disclosure Statement**

1. Applicant is reminded of the continuing obligation under 37 CFR 1.56 to timely apprise the Office of any litigation information, or other prior or concurrent proceeding, involving Patent No. 5,811,808, which is material to patentability of the claims under consideration in this reissue application. This obligation rests with each individual associated with the filing and prosecution of this application for reissue. See MPEP §§ 1404, 1442.01 and 1442.04.

### **Oath/Declaration**

2. The reissue oath/declaration filed with this application is defective (see 37 CFR 1.175 and MPEP § 1414) because of the following:
3. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the post office address of each inventor. A post office address is an address at which an inventor customarily receives his or her mail and may be either a home or business address. The post office address should include the ZIP Code designation.

The mailing address identified for inventor METSCHULEIT sets forth the street type improperly.

### **Drawings**

4. The Office will not transfer drawings. 37 CFR 1.173(a)(2).

### **Claim Objections**

5. Claim 1 is objected to because of the following informalities: the capitalization at line 11 (this is an error on the part of the Office and should have been addressed earlier using a Certificate of Correction). Appropriate correction is required.

### **Claim Rejections - 35 USC § 251**

6. Claims 1-39 are rejected as being based upon a defective reissue declaration under 35 U.S.C. 251 as set forth above. See 37 CFR 1.175.

The nature of the defect(s) in the declaration is set forth in the discussion above in this Office action.

7. Claims 1-35 are rejected under 35 U.S.C. 251 as being an improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue is based. See *Hester Industries, Inc. v. Stein, Inc.*, 142 F.3d 1472, 46 USPQ2d 1641 (Fed. Cir. 1998); *In re Clement*, 131 F.3d 1464, 45 USPQ2d 1161 (Fed. Cir. 1997); *Ball Corp. v. United States*, 729 F.2d 1429, 1436, 221 USPQ 289, 295 (Fed. Cir. 1984). A broadening aspect is present in the reissue which was not present in the application for patent. The record of the application for the patent shows that the broadening aspect (in the reissue) relates to subject matter that applicant previously surrendered during the prosecution of the application. Accordingly, the narrow scope of the claims in the patent was not an error within the meaning of 35 U.S.C. 251, and the broader scope surrendered in the application for the patent cannot be recaptured by the filing of the present reissue application.

The reissue claims 1, 2, 5, 9, 26, and 35 delete a limitation ("parallel connected") from the patent claims. Therefore, the reissue claims are broader than the patent claims in the aspect of the electrical connection of the plurality of circuit elements. The broader aspect of the reissue claims relates to subject matter that applicant previously surrendered during the prosecution of the original

application. The limitation (“parallel connected”) omitted in the reissue claims was present in the claims of the original application (at least claims 2-4, 8, 24, 26, 37, 42, 44, and 45). The examiner’s reasons for allowance in the original application stated that it was that limitation (“the means for correcting specified by independent claim 2, 24, 33 or 37” where the means for correcting specified a correction circuit including a plurality of parallel connected circuit elements and means for selectively electrically connecting said circuit elements into the detector readout circuit in response to stored offset correction values) which distinguished over a potential application of references Lung and Masarik *et al.* Applicant did not present on the record a counter statement or comment as to the examiner’s reasons for allowance, and permitted the claims to issue. The omitted limitation is thus established as relating to subject matter previously surrendered. MPEP § 1412.02.

The reissue claim 27 deletes a limitation (“capacitors”) from the patent claims. Therefore, the reissue claims are broader than the patent claims in the aspect of the electrical connection between the sample node and a reference voltage. The broader aspect of the reissue claims relates to subject matter that applicant previously surrendered during the prosecution of the original application. The limitation (“capacitors”) omitted in the reissue claims was present in the claims of the original application (claim 32). The examiner’s reasons for allowance in the original application stated that it was that limitation (“the means for correcting specified by independent claim 2, 24, 33 or 37” where the means for correcting specified a plurality of capacitors connected between said sample node and a reference voltage and a corresponding plurality of switches coupled in series with each respective capacitor and said reference voltage) which distinguished over a potential application of references Lung and Masarik *et al.* Applicant did not present on the record a counter statement or comment as to the examiner’s reasons for allowance, and permitted the claims to issue. The omitted limitation is thus established as relating to subject matter previously surrendered. MPEP § 1412.02.

**Claim Rejections - 35 USC § 112**

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1-35 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification does not describe an infrared imaging system or an infrared focal plane array in which the circuit elements of the correction circuit in the means for separately correcting offsets in the detection signals are not parallel connected. Note the illustrations of the claimed subject matter as offset correction circuit **220**. A plurality of circuit elements, capacitors **224** and switches **228**, are parallel connected in Figs. **3B** and **3C**. A plurality of circuit elements, constant current sources **400** and switches **228**, are parallel connected in Figs. **10** and **11**. A plurality of circuit elements, constant current sources **600** and switches **610**, are parallel connected in Fig. **12**. Note the repeated description of the correction circuit as a plurality of circuit elements which are "parallel connected": column 3, lines 59, 62, and 66; column 13, line 15; column 16, line 49; and, column 17, line 20. No other form of electrical connection for the plurality of circuit elements is disclosed. The original specification demonstrates, to one skilled in the art, an absence of disclosure sufficient to indicate that a patentee could have claimed the subject matter.

The specification does not describe an infrared focal plane array in which the means for correcting the analog detection signal does not comprise capacitors or parallel connected constant current sources. Note the illustrations of the claimed subject matter as offset correction circuit **220**.

A plurality of capacitors **224** are connected between the sample node **222** and a reference voltage  $V_R$  in Figs. **3B** and **3C**. A plurality of parallel connected constant current sources **400** are connected between the sample node **222** and a reference voltage  $V_R$  in Figs. **10** and **11**. A plurality of parallel connected constant current sources **600** are connected between the sample node **222** and a reference voltage  $V_R$  in Fig. **12**. Note the repeated description of the correction circuit as capacitors or parallel connected constant current sources: column 3, lines 62-64; column 13, line 15; column 16, line 49; and, column 17, line 20. No other type of circuit elements is disclosed. Since claim 27 differs from claim 34 only in the inclusion of a method of operation at the end and process limitations cannot serve to impart patentability to structures, and claim 34 recites the constant current sources, the principle of claim differentiation demands that the means for correcting in claim 27 be the disclosed plurality of capacitors. The original specification demonstrates, to one skilled in the art, an absence of disclosure sufficient to indicate that a patentee could have claimed the subject matter.

### **Claim Rejections - 35 USC § 102**

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 5, 21, 22, and 36 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hegel, Jr. *et al.* (US004752694A).

With respect to independent claim 1, Hegel, Jr. *et al.* discloses an infrared imaging system (Fig. **1**) comprising an infrared focal plane array **10** comprising a plurality of infrared detector elements (*e.g.*, **11**) arranged in an array, a readout circuit coupled to the plurality of detector elements **11** and comprising means for biasing the plurality of detector elements **11** (from bias source  $V_A$ ) so as

to provide separate detection signals corresponding to each detector element **11** in the array in response to incident infrared radiation and means for separately correcting offsets in the detection signals provided from the plurality of (detector) elements in the (focal plane) array to compensate for nonuniformities in the detector elements (column 1, lines 11-13) wherein the means for (separately) correcting comprises a correction circuit including a plurality of circuit elements (FETs **14, 15, 16**) and means **60** for selectively electrically connecting the circuit elements **14** into the detector readout circuit in response to stored offset correction values, and output means **51** for providing the corrected detection signals as an output of the focal plane array, means **70** for storing a plurality of offset correction values corresponding to the plurality of detector elements **11**, and means **71, 72** for providing the offset correction values to the means for (separately) correcting. Column 3, lines 29-52.

With respect to dependent claim 5, the means for selectively (electrically) connecting **60** in the infrared imaging system of Hegel, Jr. *et al.* comprises a plurality of switches **A, B, C** equal in number to the plurality of circuit elements **14, 15, 16** and connected in series therewith (Fig. 1).

With respect to dependent claim 21, the infrared imaging system of Hegel, Jr. *et al.* further comprises timing means (delivering the "clock input") for providing timing signals to the readout circuit.

With respect to dependent claim 22, the readout circuit in the infrared imaging system of Hegel, Jr. *et al.* further comprises offset correction logic means **62** for controlling the means for correcting in response to the timing signals.

With respect to dependent claim 36, the plurality of circuit elements **14, 15, 16** in the infrared imaging system of Hegel, Jr. *et al.* are parallel connected (Fig. 1).



### Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 6, 7, 12, 13, 15, 19, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hegel, Jr. *et al.* (US004752694A).

With respect to dependent claim 6, the memory 70 in the infrared imaging system of Hegel, Jr. *et al.* is a digital memory (column 3, lines 32-33) but there is no requirement that the digital data number stored therein is specifically in base 2. The choice of base for the storage of numbers is entirely within the ordinary skill in the art. Binary is a well-known choice of base in view of the ready availability of hardware and software of effective performance in handling numbers with a base of 2. Note the discussion of an alternative embodiment at column 4, lines 63-68 in which the number 65,536 is exactly  $2^{16}$  which is highly suggestive that digital memory 70'' stores the numbers in base 2.

With respect to dependent claim 7, there is a separate digital data number for each detector element in the infrared imaging system of Hegel, Jr. *et al.* (column 3, lines 36-39).

With respect to dependent claim 12, the formation of the elements of the infrared imaging system illustrated by Hegel, Jr. *et al.* in Fig. 1 on a single monolithic integrated circuit chip would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the known advantages of miniaturization (column 1, lines 33-36).

With respect to dependent claim 13, the detector elements **11** in the infrared imaging system of Hegel, Jr. *et al.* are bolometers (column 1, line 11). The specific identification of "micro" bolometers is a choice within the ordinary skill in the art depending on the size of the resistive sensors. A micrometer is a millionth of a meter.

With respect to dependent claim 15, the infrared imaging system of Hegel, Jr. *et al.* comprises a fixed voltage  $V_A$  coupled to the detector elements.

With respect to dependent claim 19, the output means **51** in the infrared imaging system of Hegel, Jr. *et al.* is illustrated schematically. The inclusion of buffers therein is a choice which would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the circuit protection afforded thereby.

With respect to dependent claim 24, the output means **51** in the infrared imaging system of Hegel, Jr. *et al.* is illustrated schematically. The inclusion of means for analog to digital converting and providing corresponding image data is a choice which would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the desire for manipulation of detector element signal data and the desire to view the infrared radiation incident on the array.

With respect to dependent claim 25, the provision of a memory for the image data delivered by output means **51** in the infrared imaging system of Hegel, Jr. *et al.* would have been obvious to

one of ordinary skill in the art at the time the invention was made in view of the desire for later transmission or non real time processing thereof.

### **Response to Submission(s)**

15. New matter may exist by virtue of the omission of a feature or of a step in a method. See *United States Industrial Chemical, Inc. v. Carbide & Carbon Chemicals Corp.*, 315 U.S. 668, 53 USPQ 6 (1942).

16. The United States Postal Service standardizes the correspondence address this way:

**OHLANDT GREELEY  
1 LANDMARK SQ STE 903  
STAMFORD CT 06901-2682**

The Examiner is unable to require that the correspondence address appear in any particular form. However, the deployment of the Enterprise Address Data Component means that the USPTO will identify errors in addresses through the use of Coding Accuracy Support System (CASS) certified address validation software as a first step towards a long-term goal of utilizing postal discounts. See <[http://www.uspto.gov/web/offices/cio/sitp/sitp\\_5\\_6.html](http://www.uspto.gov/web/offices/cio/sitp/sitp_5_6.html)>.

### **Conclusion**

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Constantine Hannaher whose telephone number is (703) 308-4850. The examiner can normally be reached on Monday-Friday with flexible hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seungsook (Robin) Ham can be reached on (703) 308-4090. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and Not Established for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

ch  
July 26, 2001

  
Constantine Hannaher  
Primary Examiner